

WHAT IS CLAIMED IS:

1. A gateway configured to allow multiple nodes on a computer network to communicate using one or more data protocols, wherein said one or more data protocols are transmitted over a network medium using a medium protocol, the gateway further providing an application programming interface to communicate with said multiple nodes, said gateway comprising:

an internal node database comprising information about nodes on a network;  
a software module configured to provide an active mode and a standby mode, said active mode configured to maintain said internal node database and to provide access to said node database, said standby mode configured to maintain said internal node database as a mirror copy of an external node database.

2. The gateway of Claim 1, said internal node database further comprising rules that specify actions to be taken upon a state change of a client node.

3. The gateway of Claim 2, wherein said rules are simple rules.

4. The gateway of Claim 2, wherein said rules are complex rules.

5. The gateway of Claim 2, further comprising a rules engine configured to interpret said rules.

6. The gateway of Claim 2, further comprising shims, said shims configured to translate rules into a rule definition language.

7. The gateway of Claim 2, wherein said state change comprises a change in an instance variable of said client node.

8. The gateway of Claim 1, wherein said internal node database is updated by issuing ping requests.

9. The gateway of Claim 1, wherein said software module is configured to transition to said active mode when an unacknowledged client request is detected.

10. The gateway of Claim 1, further configured to tunnel a first protocol through a second protocol.

11. The gateway of Claim 10, wherein said medium is a power line and said medium protocol is a power line protocol.

1 12. The gateway of Claim 1, wherein said medium is a power line and said  
2 medium protocol is a PLX protocol.

1 13. The gateway of Claim 7 further comprising an event handler configured to  
2 notify a user application when a change occurs in an instance variable of said client node.

1 14. The gateway of Claim 1, further comprising an object-oriented application  
2 programming interface.

1 15. The gateway of Claim 14, further comprising an internet browser configured to  
2 provide a user interface to information in said internal node database.

1 16. The gateway of Claim 15, wherein said user interface is configured to allow a  
2 user to control nodes on a power line network.

1 17. A computer network comprising:  
2 a power line network medium; and ✓  
3 gateway means for routing raw data information from said power line network  
4 medium to user applications through the use of dispatch control blocks.

1 18. A gateway comprising:  
2 a node database; ✓  
3 dispatcher means for creating and interpreting dispatch control blocks;  
4 device driver means for controlling a network interface adapter; and  
5 shim means for adapting said device control blocks to said device driver  
6 means.

1 19. A method for using a desired protocol to communicate between nodes on a  
2 network, said method comprising: ✓

3 creating a node database containing information about said nodes;  
4 designating an active gateway node to maintain said node database, said active  
5 gateway node providing one or more access methods to access said node database; and  
6 mirroring said node database in one or more standby server nodes.

1 20. The method of Claim 19 further comprising interpreting and executing rules  
2 that specify actions to be taken when a state change occurs in a client node.

1 21. The method of Claim 20, wherein said rules are interpreted by a rules engine.

1 22. The method of Claim 20, further comprising the step of generating event  
2 notifications when said state change occurs.

1 23. The method of Claim 22, wherein said notifications are provided to a  
2 dispatcher.

1 24. The method of Claim 20, further comprising the step of translating received  
2 data into a rule definition language.

1 25. The method of Claim 20, wherein said state change comprises a change in an  
2 instance variable of said client node.

1 26. The method of Claim 19, further comprising the step of issuing ping requests  
2 and listening for responses to said ping requests, said responses used to update said node  
3 database.

1 27. The method of Claim 19, further comprising the step of activating one of said  
2 standby server nodes after said active server becomes inactive.

1 28. The method of Claim 19, further comprising the step of encapsulating raw  
2 packets in a first protocol into wrapper packets in said desired protocol and tunneling said raw  
3 packets through said desired protocol.

1 29. The method of Claim 19, wherein said medium is a power line and said  
2 medium protocol is a power line protocol.

1 30. The method of Claim 19, wherein said medium is a power line and said  
2 medium protocol is a PLX protocol.

1 31. The method of Claim 19, further comprising the step notifying a user  
2 application when a change occurs in an instance variable of said client node.

1 32. The method of Claim 19, further comprising the step of using an internet  
2 browser to view information in said node database.

1 33. The method of Claim 19, further comprising the step of using an internet  
2 browser to control nodes on a power line network.